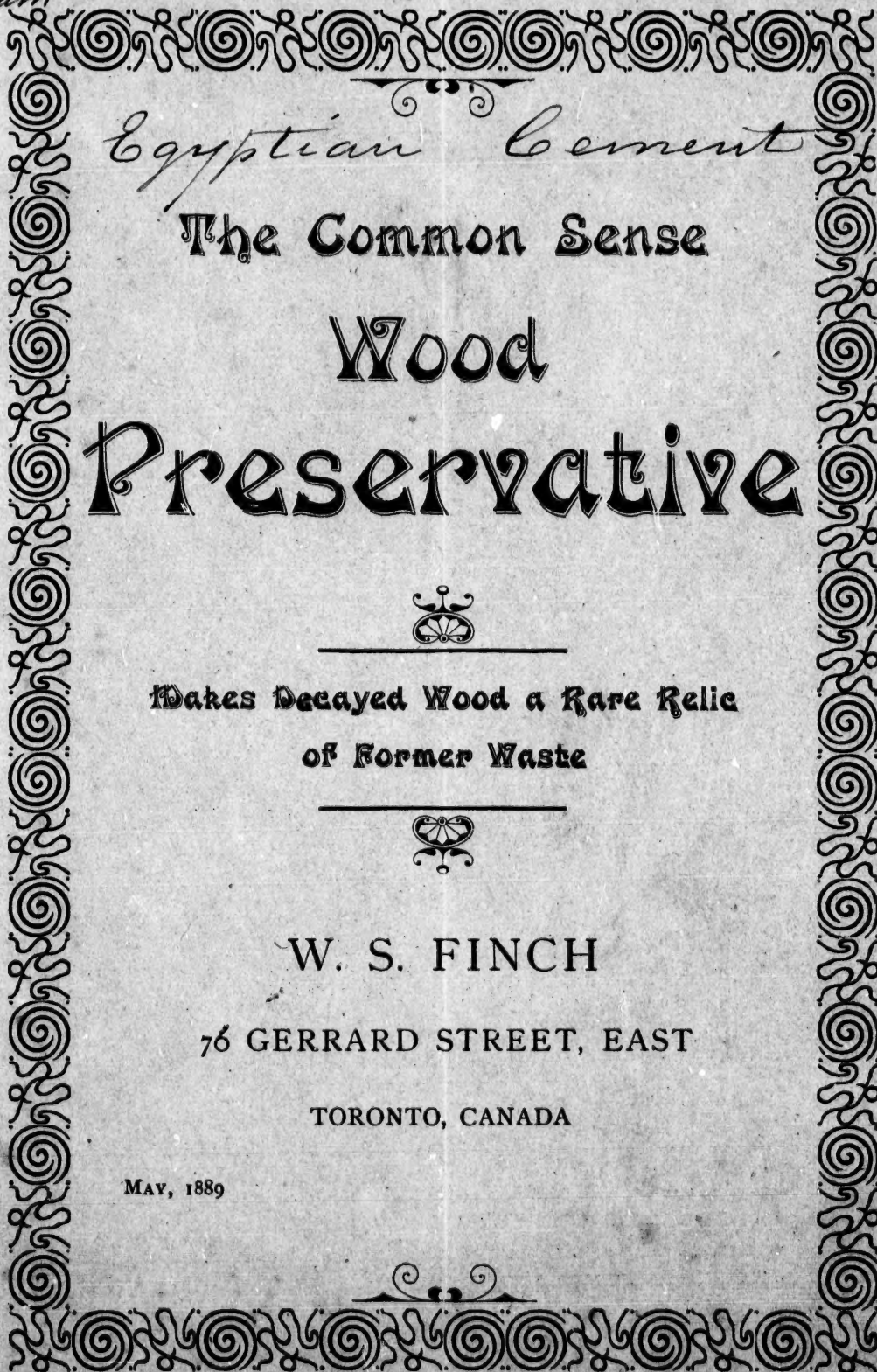


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Egyptian Cement

The Common Sense

Wood

Preservative



Makes Decayed Wood a Rare Relic
of Former Waste



W. S. FINCH

76 GERRARD STREET, EAST

TORONTO, CANADA

MAY, 1889



BINGHAM & WEBBER, TORONTO

The Common Sense Wood Preservative



T is surprising that, knowing the enormous loss incurred by the decay of lumber, means are not used for its prevention. There may be reasons—for instance: ignorance as to the cause of such decay, the uncertainty of finding an efficient remedy, or the unspoken thought that the more decay the more work there will be, and the more contracts for replacing them. It is admitted that the loss to Canada from this cause would pay the interest on the national debt; and the Department of Forestry at Washington, D.C., estimates that the loss to the United States for railroad ties alone amounts to twenty-five millions annually. Add to this the loss for bridges, platforms, block-paving, walks, elevators, wharves, telegraph poles, box cars, fencing, etc., and one hundred million dollars yearly would not pay for this waste.

Besides this money loss, decayed wood, physicians assert, is a prolific cause of sickness and death.

The cause of the decay of wood is not generally known. It has been thought by some to arise from slow combustion, and that as everything decays, lumber can be no exception. Scientists, notably P. H. Dudley, Esq., C.E., New York (articles and plates in *Popular Science Monthly*, August and September, 1886) demonstrate that the microscope reveals the real cause: it is the result of the growth of a fungus plant of the mushroom type upon damp wood, especially when excluded from light and air, to prevent which in elevators fans are sometimes used. This fungus, when seen on decayed wood, has been thought to be the result of the decay. Instead of this, it is the cause. This is the reason for a space being left

on piles of lumber. If the boards are laid on each other without space, the fungus immediately grows on the wood, and in warm, damp weather, the lumber very soon decays. Car-goes of lumber and timber are often damaged by the growing mycelia on the pieces. Specimens of all the various trees in the United States have been collected in the American Museum of Natural History, in New York, by Mr. Morris Jessup, and, while it has been possible to transport them across the continent, it has not been possible to protect them from the attacks of fungi, and some of them will have to be replaced. Hem-lock inch boards can be completely rotted through in six to eight weeks of July and August weather by the mycelia attacking both sides of the boards, when damp, and piled without an air space between them. In bridges, ends of posts and struts, tenons of bridges and mortices, especially when resting on stone or brick, on becoming damp, this mycelia grows, and decay takes place.

This mycelia is not propagated by seeds, but by microscopic spores, which from a batch of decayed wood are blown by the wind and settle on any damp wood near. Consequently a perfect preservative must make it impossible for it to grow upon the wood. Some elevators erected only a few years have had to be underpinned at cost of from \$60,000 to \$70,000, which could be entirely prevented by using this preservative. This colorless plant grows upon the wood, feeding on it, and literally undoing all the tree has done in growing by resolving it into its native elements, the air and soil.

It has also been supposed that the decay of lumber proceeds from the inside, which it does not, except in cases where the wood has been painted while yet unseasoned, or has been seasoned out of doors, allowing the outer part of the wood to become so hardened as to prevent the dampness in the wood from exuding, and this interior dampness ferments and decays. Hence, in former methods of preserving, the sap has been expelled by pressure and the vacuum filled with chemicals. But we now find that the decay is from the outside—where the wood is damp and not accessil' to light and air. First the

bark goes, then the sap, and so it proceeds until the whole is disintegrated and destroyed.

W. S. Finch, of Toronto, Canada, has introduced a preservative which by absorption and capillary attraction penetrates the wood, which is porous, and, mixing with the sap or albumen of the wood, makes *it* a preservative—filling and closing the pores, thereby preventing interior fermentation or decay, and no fungous growth can affect it from the outside.

In 1875 two-inch pine planks and four-by-four scantlings for sidewalks were coated with this cheap and powerful preservative, and laid, at the request of the City Council, in different wards of the city of Toronto, and after eight years' use, were found to be perfectly sound—only worn thin and uneven, the knots protruding. Sample planks and scantlings of that lumber can now be seen, which, on being cut, are found to have retained even the pine smell, quite fresh. The explanation is, that when lumber is so treated the destructive fungus cannot grow upon it, and it becomes hardened, seasoned, and not subject to decay.

This preservative has been used for railroad ties, railway platforms, warehouse floors, sidewalks, scows, foundation planks under walls of warehouses erected on made land, etc. It is cheap, safe, effective and sanitary. No expense for carriage of lumber or costly plant is involved, as wherever the lumber is piled the preservative can be applied by unskilled labor, with the use of a broom or brush, or by saturating in a tank, and as soon as dry the lumber is ready for use. It will not readily burn after treatment, and there is no risk or danger in using the preservative.

The cost of material and labor may be estimated at from two to three dollars per thousand feet, board measure. The preservative can be shipped in cans or barrels at about seventy-five cents per gallon.

The preservative is endorsed by many of the aldermen, citizens, architects and builders of the city of Toronto and

New York, and has been proved to be one of the best, cheapest and most effective preservatives known. Creosote preserves well, but it costs from seven to twelve dollars per thousand feet, besides freight charges to and from the works, to treat wood with it. It discolors the wood, and gives it the odor of tar, while Mr. Finch's preservative produces no discoloration, and the sample of that used for eight years can be written on, the pores are so completely filled up.

Extract of Report from Department of Forestry, Canada, 1889

W. R. PHIPPS, Commissioner.

"Wishing, myself, to see Mr. Finch's method of operation I allowed him to coat the planks, above and below, sides and ends, of over 100 feet, in a lane of my own. This was about a year and a half ago. The effect is very beneficial. Some few planks were left untouched. These are evidently beginning to rot, while no sign of decay is manifest in the others. They were all new planks. In any future case of laying planking I would certainly, if available, obtain this preservative and apply it. The lane where these planks were laid is damp, and seems specially apt to rot the planks, but this year they have kept remarkably dry and sound. The dampness does not cling to nor penetrate them, as before."

A diploma was awarded at the Dominion Exhibition, Toronto, 1887, by judges who have seen its results.

Railroad and other corporations will find it invaluable for **Ties, Platforms, Wharf Timber, Bridges, Crossings, Kerbing, Elevators, Block Paving, Basements, Sidewalks, etc.**

**This Preservative is Endorsed and Certified
to by the following:**

ALDERMEN—

JOHN BAXTER, ESQ. J. CROCKER, ESQ.
W. BELL, ESQ. J. SHAW, ESQ.
J. B. BOUSTEAD, ESQ.

EX-ALDERMEN—

THE LATE N. C. LOVE, ESQ., and others.

CITY EMPLOYEES—

R. WILSON, City Inspector.
M. O'CONNOR, City Foreman of Plankers.
JAMES KENNEDY, Ex-City Foreman.
T. MCGOWAN, City Foreman St. John's Ward.
F. FLIGHT, Yard Foreman—and others.

[Mr. Flight found the planks, when brought into the yard, so sound that he sent them out again to be used on other streets, turning them upside down on account of the knots protruding.]

CITIZENS—

GEO. GOULDING ESQ., and many other citizens, who saw the lumber laid down and again saw it when taken up, and found it perfectly sound.

ARCHITECTS—

W. G. STORM, ESQ.
MESSRS. GORDON & HELLIWELL.
CHAS. WALTON, ESQ.
CHAS. MARTIN, ESQ.
KIVAS TULLY, ESQ., Chief Engineer for Ontario Government, and others, of Toronto.
STEPHEN B. HATCH, ESQ., 115 Broadway, New York.
MESSRS. JAMES & JAMES, 137 Broadway, New York, Architects for Board of Trade Building, Toronto.
JAMES GAYLORD, ESQ., Inspector for Mr. Waite, of Buffalo, New York, who is Architect of Parliament Buildings, Canada Life Assurance Co., and Bank of Commerce Buildings, Toronto.

Department of Forestry, Washington, D.C.

REPORTS FROM 35 RAILROADS RECEIVED.

Miles of railroads in operation,	45,687
Ties used on them,	16,668,423
Average cost of each tie,	36c.
Ties per mile used for renewals,	365
Average durability of ties,	7 years
Total railroad mileage in the United States,	187,500
Ties used per mile,	2,640
Yearly average consumption of ties,	70,714,286
Total number of ties in use,	495,000,000
Telegraph and telephone poles, etc. (miles),	160,000
Marine purposes (tons),	6,654,967
Yearly outlay for renewals,	\$25,174,280
Bridge timber in use, renewed every 7 or 8 years,	\$375,000,000

ORDER FROM R. CHRISTIE, ESQ., INSPECTOR OF PRISONS FOR ONTARIO.

"Please ship at once 25 gallons of your wood preservative to Mr. Thomas McCrossen, Superintendent for the Reformatory for Boys, Penetanguishene, for sanitary purposes, preserving new basement floors of institution, on account of the old ones being so decayed as to cause diphtheria."

FROM MESSRS. GORDON & HELLIWELL, ARCHITECTS, TORONTO, TO HON. C. F. FRASER, MINISTER OF PUBLIC WORKS FOR ONTARIO.

TORONTO, February 4, 1889.

DEAR SIR,

Mr. W. S. Finch has a lumber pre-ervative which we believe is an excellent preventative of decay. We have had the plank foundations and basement timbers of nearly all the buildings of the Land Security Company treated with it.

Yours respectfully,

GORDON & HELLIWELL.

TORONTO, CANADA, June 26, 1888.

W. S. FINCH, ESQ.

DEAR SIR,—I have much pleasure in stating that for ten years I was Alderman for the Ward of St. James, in the city of Toronto, and for several years a member of the Board of Works. I know that the planks and scantlings were preserved

and laid in different wards of this city to prove its effects, for which the city paid \$1,000 in 1875. After seven or eight years, the sidewalks, being worn, were taken up, when it was found that the planks and stringers were in a complete state of preservation, showing no signs whatever of decay or rot—in fact, being as sound as when laid down. Some of this wood is now in your possession, and can be inspected at any time. The process tends to harden and season the fibre of the wood, thus causing it to last twice as long as when laid in its natural state. This wood is also invaluable for sanitary purposes.

I am, dear sir,

Yours respectfully,

N. C. LOVE.

TORONTO, March 25th, 1889.

MR. FINCH.

DEAR SIR,—After careful inspection of your specimens of preserved lumber, which have been in use for many years, in the most exposed and trying situations, I have no hesitation in stating that your process is the most valuable I have met with. The samples of sidewalks which have been in use eight years are now absolutely as sound as ever, which strikes me as being extraordinary. I shall certainly make use of your invention whenever I have opportunity.

Yours truly,

J. KING JAMES (of James & James.)

Architects, 137 Broadway, New York,

Architects of Toronto Board of Trade Buildings.

Letter of same import from Stephen B. Hatch, Esq., Architect, 115 Broadway, New York, who has constructed many of the public works for the State of New York.

TORONTO, April 1889.

MR. W. S. FINCH.

DEAR SIR,—I was and am still foreman of St. John's Ward, in the city of Toronto. The preserved lumber which was laid on Yonge street, after eight years' use, was worn

uneven, the knots protruding. It had to be taken up under my direction. I found it perfectly sound—no sign of decay on any of it. Ordinary sidewalks decay in from five to seven years, but yours, after eight years' use, is as sound and free from decay as any wood can be.

T. McGOWAN,

208 Chestnut St., Toronto.

TORONTO, April 7th, 1889.

MR. W. S. FINCH.

DEAR SIR,—I have been Inspector of Streets for the city of Toronto twenty years, and know the above to be true, for a section of sidewalk was put down on Queen street, under my direction, in 1875, and, when taken up, was hardened, seasoned and sound as any wood in the world.

JAMES KENNEDY,

Nassau Street, Toronto.

TORONTO, May, 1889.

MR. W. S. FINCH.

DEAR SIR,—I saw the sidewalk laid in 1875, and now find the same wood perfectly sound, seasoned and hardened, and it smells like new pine.

M. A. INGLEHART,

Landscape Gardener, Mount Pleasant.

Any number of endorsements can be obtained, if required. Correspondence solicited. City, County, State and Province rights for sale, or preservative shipped to address.

Address W. S. FINCH,

70 GERRARD ST. EAST,

TORONTO, CANADA.

Toronto, April, 1889.

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